# TAB J PART 2

- (i) heating said core to a temperature between approximately 175°F to 300°F for approximately 10 to 25 minutes;
  - (ii) applying approximately 1000 p.s.i. pressure to said core; and
- (iii) cooling said core to a temperature in the range of approximately 40°F to 65°F for approximately 10 to 25 minutes.

A process as recited in flaim 1 comprising the further step of inserting an electronic contact element into said cay ty.

- 16. The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 1, wherein said at least one electronic element is a micro-chip and an associated circuit board antenna or an associated wire antenna.
- 17. The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 1, wherein said at least one electronic element is a read/write integrated chip and an associated antenna.
- 18. A process for incorporating at least one electronic element having at least one electronic subcomponent in the manufacture of a plastic card, comprising the steps of:
- (a) providing first and second plastic core sheets, at least one core sheet having a cavity formed therein;
- (b) positioning said at least one electronic element in the absence of a non-electronic carrier between said first and second plastic core sheets to form a layered core, said plastic core sheets defining a pair of inner and outer surface of said core, and said cavity positioned so as to expose said at least one electronic subcomponent therein;

- (c) inserting a spacer into said cavity, said spacer substantially filling said cavity and covering said at least one electronic subcomponent;
- (d) positioning said core in a faminator apparatus, and subjecting said core to a heat and pressure cycle, said heat and pressure cycle comprising the steps of:
  - (i) heating said core for a first period of time;
- (ii) applying a first pressure to said core for a second period of time such that said at least one electronic element is encapsulated by said core;
  - (iii) cooling said core while applying a second pressure to said core;
  - (e) removing said spacer from the cavity of said core.
- A process as recited in claim 18, wherein said electronic subcomponent comprises one or more elements from the group consisting of a microprocessor chip, a contact pad, a transponder, and a contact sensor.
- 20. A plastic card constructed in accordance with claim 1.
- 21. A plastic card constructed in accordance with claim 18.
- 22. The process of claim 18, further comprising the step of coating at least one of said surfaces of said core with a layer of ink.
- The process of claim, further comprising the step of coating said at least one surface of said core with a layer of ink prior to positioning said overlaminate film on said at least one surface of said core.

The process of claim 14, further comprising the step of coating said at least one surface of said core with a layer of ink prior to positioning said overlaminate film on said at least one surface of said core.

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## Practitioner's Docket No. 6014-2-CON

**PATENT** 

## COMBINED DECLARATION AND POWER OF ATTORNEY

(ORIGINAL, DESIGN, NATIONAL STAGE OF PCT, SUPPLEMENTAL, DIVISIONAL, CONTINUATION, OR C-I-P)

As a below named inventor, I hereby declare that:

## TYPE OF DECLARATION

This declaration is for a continuation application.

## INVENTORSHIP IDENTIFICATION

My residence, post office address and citizenship are as stated below, next to my name. I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter that is claimed, and for which a patent is sought on the invention entitled:

## TITLE OF INVENTION

Hot Lamination Process for the Manufacture of a Combination Contact/Contactless Smart Card and Product Resulting Therefrom

#### SPECIFICATION IDENTIFICATION

The specification is attached hereto.

## ACKNOWLEDGMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information, which is material to patentability as defined in 37, Code of Federal Regulations, § 1.56.

## CLAIM FOR BENEFIT OF PRIOR U.S. PROVISIONAL APPLICATION(S) (35 U.S.C. § 119(e))

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below:

#### PROVISIONAL APPLICATION NUMBER

FILING DATE

60/005,685

10/17/1995

60/024,255

10/21/1996

## CLAIM FOR BENEFIT OF EARLIER U.S./PCT APPLICATION(S) UNDER 35 U.S.C. § 120

I hereby claim the benefit, under Title 35, United States Code, § 120, of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information that is material to patentability as defined in 37, Code of Federal Regulations, § 1.56 and that is material to the examination of this application, namely, information where there is a substantial likelihood that a reasonable examiner would consider it important in deciding whether to allow the application to issue as a patent, that occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application.

PRIOR U.S. APPLICATIONS OR PCT INTERNATIONAL APPLICATIONS DESIGNATING THE U.S. FOR BENEFIT UNDER 35 USC § 120:						
U.S. APPLICA	ATIONS	STATUS				
U.S. APPLICATIONS	U.S. FILING DATE	Patented	Pending	Abandoned		
1.0 /5,817,207	10/07/1996	x				
2.0 /08/918,582	08/19/1997		x			
PCT APPLICATION U.S.	DESIGNATING THE					
PCT PCT FILING DATE APPLICATION NO.		U.S. APPLICATION NOS. ASSIGNED (IF ANY)				

## POWER OF ATTORNEY

I hereby appoint the following practitioner(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Mark A. Watkins

Registration Number 33,813

I hereby appoint the practitioner(s) associated with the Customer Number provided below to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

SEND CORRESPONDENCE TO

DIRECT TELEPHONE CALLS TO:

Mark A. Watkins (330) 864-5550

Mark A. Watkins Oldham & Oldham Co., L.P.A. 1225 W. Market Street Akron, OH 44313 USA

Customer Number 021324

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## DECLARATION

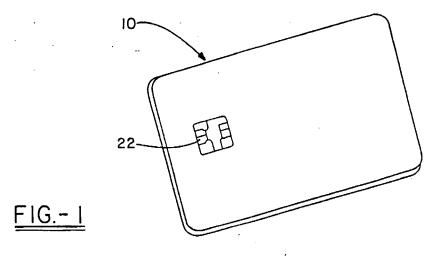
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

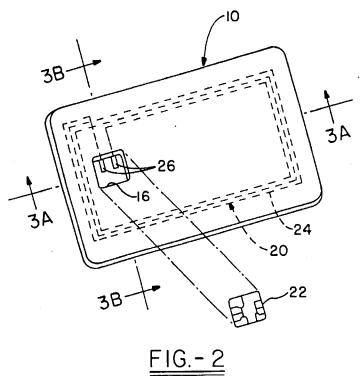
## SIGNATURE(S)

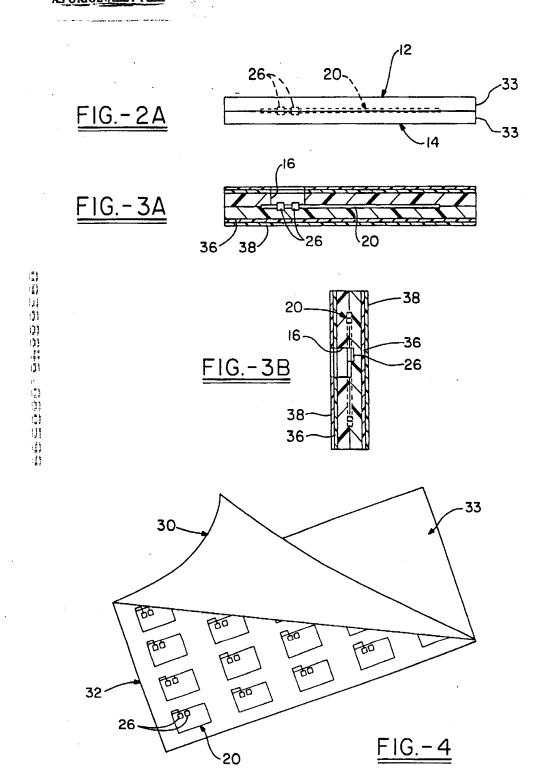
Keith R. Leighton Inventor's signature Date\_ Country of Citizenship USA Residence Lorain, OH Post Office Address 2817 Fulmer Road Lorain, OH 44053

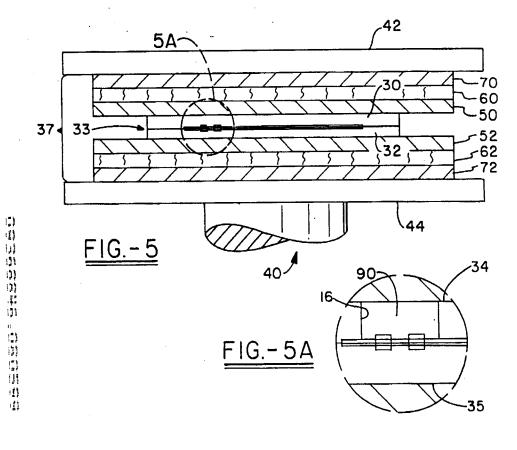
(Declaration and Power of Attorney-page 3 of 3)

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		•		N) CLAIMING SMA INDEPENDENT IN	,	Docket No. 6014-2
Serial No.	;	FI	iling Date	Patent	No.	issue Date
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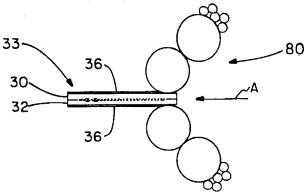
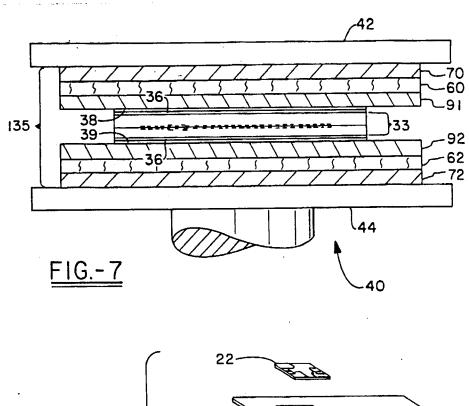


FIG.-6



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## UNITED STATES DEPARTMENT OF COMMERCE

Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS Weshington, D.C. 20231

FIRST NAMED APPLICANT ATTORNEY DOCKET NO/TITLE APPLICATION NUMBER FILING/RECEIPT DATE

09/368,846

08/05/99

LEIGHTON

021324

OLDHAM & GLDHAM CO TWIN DAKS ESTATE 1225 W MARKET STREET AKRON OH 44313

0212/0831

NOT ASSIGNED

DATE MAILED:2876

## NOTICE TO FILE MISSING PARTS OF APPLICATION Filing Date Granted

08/91/99

6014-2-CON

An Application Number and Filing Date have been assigned to this application. The items indicated below, however, are missing. Applicant is given TWO MONTHS FROM THE DATE OF THIS NOTICE within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1:138(a). If any of items 1 or 3 through 5 are indicated as missing, the SURCHARGE set forth in 37 CFR 1.16(e) of \$65.00 for a small entity in compliance with 37 CFR 1.27, or \$130.00 for a non-small entity, must also be timely submitted in reply to this NOTICE to avoid abandonment.

H all d	required items on this form are filed within the period set above, the total amount owed by applicant as a all entity (statement filed)    non-small entity is \$
	The statutory basic filing fee is:  missing. insufficient.  Applicant must submit \$
	total claims over 20.
	forindependent claims over 3.
	for multiple dependent claim surcharge. Applicant must either submit the additional claim fees or cancel additional claims for which fees are due.
	The oath or declaration: is missing or unsigned. does not cover the newly submitted items. An oath or declaration in compliance with 37 CFR 1. 63, including residence information and identifying the application by the above Application Number and Filing Date is required. The signature(s) to the oath or declaration is/are by a person other than inventor or person qualified under 37 CFR 1.42, 1.43 or 1.47. A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above
	A property signed bath of declaration in compliance with 57 OPA 1.05, identifying the application by the above Application Number and Filing Date, is required.
□ 5.	The signature of the following joint inventor(s) is missing from the oath or declaration:
	An oath or declaration in compliance with 37 CFR 1.63 listing the names of all inventors and signed by the omitted Inventor(s), identifying this application by the above Application Number and Filing Date, is required.
□ <b>6</b> .	A \$50.00 processing fee is required since your check was returned without payment (37 CFR 1.21(m)).
	Your filing receipt was mailed in error because your check was returned without payment.  The application was filed in a language other than English.
□ 8.	Applicant must file a verified English translation of the application, the \$130.00 set forth in 37 CFR 1.17(k), unless previously submitted, and a statement that the translation is accurate (37 CFR 1.52(d)).
□ 9.	OTHER:
Direc	t the reply and any questions about this notice to "Attention: Box Missing Parts."
1.	A copy of this notice MUST be returned with the reply.

Customer Service Center

Initial Patent Examination Division (703) 308-1202





## UNITED STATES DEPARTMENT OF COMMERCE

Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231

FILING/RECEIPT DATE

FIRST NAMED APPLICANT

ATTORNEY DOCKET NO./TITLE

09/368,846 08/05/99 LEIGHTON

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6014-2-CON

021324 OLDHAM & OLDHAM CO TWIN DAKS ESTATE 1225 W MARKET STREET AKRON OH 44313

0212/0831

NOT ASSIGNED

DATE MAILED:2876

#### NOTICE TO FILE MISSING PARTS OF APPLICATION Filing Date Granted والفوارات فاحد مويناه والدفاع بأسا معجدتا بالطافي الريطاني المارات الماليسيلية

0% 08/31/99

An Application Number and Filing Date have been assigned to this application. The items indicated below, however, are missing. Applicant is given TWO MONTHS FROM THE DATE OF THIS NOTICE within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filling a petition accompanied by the extension fee under the provisions of 37 CFR 1:138(a). If any of Items 1 or 3 through 5 are indicated as missing, the SURCHARGE set forth in 37 CFR 1:18(a) or ☐ \$55.00 for a small entity in compliance with 37 CFR 1:27, or ☐ \$130.00 for a non-small entity, must also be timely submitted in reply to this NOTICE to avoid abandonment.

. •	H ell D'en	required items on this form are filed within the period set above, the total amount owed by applicant as a sall entity is \$ 45.00
h)_	□ 1. ***	The statutory basic filing fee is:  Implicant  Applicant must submit \$to complete the basic filing fee and/or file a small entity statement claiming such status (37 CFR 1.27).
-	□ 2.	The following additional claims fees are due:
		for total claims over 20.
		forindependent claims over 3.
	· .	\$for multiple dependent claim surcharge.  Applicant must either submit the additional claim fees or cancel additional claims for which fees are due.
	Ø 3. •	The oath or declaration:  'Is missing or unsigned.  Odes not cover the newly submitted items.  An oath or declaration in compliance with 37 CFR 1. 63, including residence information and identifying the application by the above Application Number and Filing Date is required.
¥.	□ 4.	The signature(s) to the oath or declaration is/are by a person other than inventor or person qualified under 37 CFR 1.42,
.3.3 *** *	, j	1.43 or 1.47.  A properly signed bath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
	□ <b>5</b> .	The signature of the following joint inventor(s) is missing from the oath or declaration:
٠.		An oath or declaration in compliance with 37 CFR 1.63 listing the names of all inventors and signed by the omitted inventor(s), identifying this application by the above Application Number and Filing Date, is required.
		A \$50.00 processing fee is required since your check was returned without payment (37 CFR 1.21(m)).
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Direct the reply and any questions about this notice to "Attention: Box Missing Parts."

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Customer Service Center

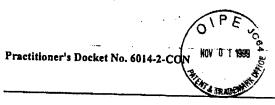
Initial Patent Examination Division (703) 308-1202

J54

10-27-99

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Signature





## COMBINED DECLARATION AND POWER OF ATTORNEY

(ORIGINAL, DESIGN, NATIONAL STAGE OF PCT, SUPPLEMENTAL, DIVISIONAL, CONTINUATION, OR C-I-P)

As a below named inventor, I hereby declare that:

## TYPE OF DECLARATION

This declaration is for a continuation application.

## INVENTORSHIP IDENTIFICATION

My residence, post office address and citizenship are as stated below, next to my name. I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter that is claimed, and for which a patent is sought on the invention entitled:

## TITLE OF INVENTION

Hot Lamination Process for the Manufacture of a Combination Contact/Contactless Smart Card and Product Resulting Therefrom

## SPECIFICATION IDENTIFICATION

The specification is attached hereto.

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#### PROVISIONAL APPLICATION NUMBER

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60/024,255

FILING DATE

10/17/1995

10/21/1996

# CLAIM FOR BENEFIT OF EARLIER U.S./PCT APPLICATION(S) UNDER 35 U.S.C. § 120

I hereby claim the benefit, under Title 35, United States Code, § 120, of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information that is material to patentability as defined in 37, Code of Federal Regulations, § 1.56 and that is material to the examination of this application, namely, information where there is a substantial likelihood that a reasonable examiner would consider it important in deciding whether to allow the application to issue as a patent, that occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application.

PRIOR U.S. APPLICATIONS OR PCT INTERNATIONAL APPLICATIONS DESIGNATING THE U.S. FOR BENEFIT UNDER 35 USC § 120:							
TIONS	STATUS						
U.S. FILING DATE	Patented	Pending	Abandoned				
10/07/1996	x						
08/19/1997		х					
ESIGNATING THE							
PCT PCT FILING DATE APPLICATION NO.							
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## POWER OF ATTORNEY

I hereby appoint the following practitioner(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Mark A. Watkins

Registration Number 33,813

 $I\,hereby\,appoint\,the\,practitioner(s)\,associated\,with\,the\,Customer\,Number\,provided\,below\,to\,prosecute$ this application and to transact all business in the Patent and Trademark Office connected therewith.

SEND CORRESPONDENCE TO

Mark A. Watkins Oldham & Oldham Co., L.P.A. 1225 W. Market Street Akron, OH 44313 USA

DIRECT TELEPHONE CALLS TO: Mark A. Watkins **330) 864-5550** 

Customer Number 021324

## DECLARATION

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

SIGNATURE(S)

Country of Citizenship USA

Keith R. Leighton

Inventor's signature Date 10-19-99

2817 Fulmer Road Lorain, OH 44053

Residence Lorain, OH

Post Office Address



ntioner's Docket No. 6014-2-CON

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Leighton, Keith R.

Application No.: 09/368,846

Group No.: 2876

Filed: August 5, 1999

Examiner:

Hot Lamination Process for the Manufacture of a Combination Contact/Contactless Smart

Card and Product Resulting Therefrom

RECEIVED APR 2 5 2000

**Assistant Commissioner for Patents** Washington, D.C. 20231

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT

TECHNOLOGY CENTER 2800

WITHIN THREE MONTHS OF FILING OR BEFORE MAILING OF FIRST OFFICE ACTION (37 C.F.R. 1.97(b))

IDENTIFICATION OF TIME OF FILING THE ACCOMPANYING INFORMATION DISCLOSURE STATEMENT

The information disclosure statement submitted herewith is being filed within three months date of the application or date of entry into the national stage of an international application or date of entry into the national stage of an international application mailing date of a first Office action on the merits, whichever event occurs last. 37 C.F.R. 1.97(b)

RECEIVED

SIGNATURE OF PRACTITIONER

NOV 0 1 1999

Reg. No. 33,813 Tel. No.: (330) 864-5550ECHNOLOGY CENTER 2800 Mark A. Watkins Oldham & Oldham Co., L.P.A.

1225 W. Market Street

CERTIFICATE OF MAILING/TRANSMISSION (37 C.F.R. 1.8(a))

I hereby certify that, on the date shown below, this correspondence is being:

MAILING

Date: 10-27-79

FACSIMILE

transmitted by facsimile to the Patent and

deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

Signature

MARK A. WATKINS

(type or print name of person certifying)

Trademark Office

(Transmittal of Information Disclosure Statement Within Three Months of Filing or Before Mailing of First Office Action)



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Leighton, Keith R.

Examiner:

not yet assigned

Serial No:

09/368,846

Art Unit:

2876

Filed:

August 5, 1999

Date: October 27, 1999

**FIECEIVED** 

For: HOT LAMINATION PROCESS FOR THE MANUFACTURE OF A

APR 2 5 2000

COMBINATION CONTACT/CONTACTLESS SMART CARD AND

PRODUCT RESULTING THEREFROM

TECHNOLOGY CENTER 2800

Commissioner of Patents and Trademarks Washington, D.C. 20231

RECEIVED

NOV 0 1 1999

## INFORMATION DISCLOSURE STATEMENT Under 37 CFR § 1.97

TECHNOLOGY CENTER 2800

This Information Disclosure Statement is filed within three months after the filing date of this application and is therefore timely. 37 CFR §1.97(b).

The filing of this Information Disclosure Statement shall not be construed as a representation that a search has been made (37 CFR §1.56(g)), an admission that the information cited is, or is considered to be, material to patentability or that no other material information exists.

The filing of this Information Disclosure Statement shall not be construed as an admission against interest in any manner. Notice of January 9, 1992, 1135 O.G. 13, at 25.

This Information Disclosure Statement is made to comply with the dut of candor. imposed on all individuals associated with the filing or prosecution of this application, a defined by 37 CFR §1.56(c).

A list of the patents and other cited references cited by the applicant are enclosed two sheets of Form PTO-1449 which are attached and made a part hereof. Copies of the references are enclosed herein. The relevance of each cited reference is thought to have been sufficiently discussed in the prosecution of the parent applications and, therefore, has not

been recited herein.

This Information Disclosure Statement is based on information contained in the undersigned attorney file as of the date of this statement and is inclusive of the best information known to the undersigned at that date.

The Examiner is kindly requested to consider the Information Disclosure Statement in addition to any references identified by the Examiner as a result of his independent search and examination.

Respectfully submitted,

OLDHAM & OLDHAM CO., LPA

Mark A. Watkins

Registration 33,813

MAW/JDD/srm

Twin Oaks Estate 1225 West Market Street Akron, OH 44313-7188 (330) 864-5550

Attorney Docket: 6014-2-CON

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1'	AB	5,067,008	11/19/91	Yanak	a et al.			
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Form PTO-A220 (also form PTO-1449)

DIFORMATION DISCLOSURE CLTION (Use several sheets if necessary)	Docket Number (Optional) 6014-2-CON Applicant(s) Keith R. Leighton		1936/8	16
	Applicant(s)  Keith R. Leighton		- 1/2// ()	+
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	U.S. PATENT DOCUMENTS			<b>.</b>
INITIAL PARE DOCUMENT NUMBER DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AL 5,173,840 12/22/92	Kodai et al.	(		-
лм 5,272,596 12/21/93	Honore et al.	ļ,——	-	
AN 5,412,192 5/2/95	Hoss			
AO 5,268,699 12/7/93	Laute et al.			
AP 5,809,633 9/22/98	Mundigleet at.			
AQ 4,841,135 6/29/89	Hida et al.			
AR 3,994,225 11/30/76	Sitzberger	<u> </u>	700 MAI.	<u> </u>
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Form PTO-A#20 (also form PTO-1449)

Potent and Trademark Office \* U.S. DEPARTMENT OF COMMERCE



# UNITED STATE. JEPARTMENT OF COMMERCE Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

 APPLICATION NO.
 FILING DATE
 FIRST NAMED INVENTOR
 ATTORNEY DOCKET NO.

 09/368,846
 08/05/99
 LEIGHTON
 K
 6014-2-CON

021324 OLDHAM & OLDHAM CO TWIN OAKS ESTATE 1225 W MARKET STREET AKRON OH 44313 IM22/1206

EXAMINER AFTERGUT, J

ART UNIT PAPER NUMBER

DATE MARLED: 12/06

12/06/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

. •	Application No.	Applicant(s)
	09/368,846	LEIGHTON, KEITH R.
Office Action Summary	Examiner	Art Unit
	Jeff H. Aftergut	1733
The MAILING DATE of this communication ap	opears on the cover sheet wi	th the correspondence address
Period for Reply  A SHORTENED STATUTORY PERIOD FOR REF THE MAILING DATE OF THIS COMMUNICATION  - Extensions of time may be available under the provisions of 37 CFR after SIX (8) MONTHS from the mailing date of this communication.  If the period for reply specified above is less than thirty (30) days, a :  If NO period for reply is specified above, the maximum statutory peri Failure to reply within the set or extended period for reply will, by state - Any reply received by the Office later than three months after the may earned patent term adjustment. See 37 CFR 1.704(b).  Status	N. 1.136 (a). In no event, however, may a reply within the statutory minimum of thi od will apply and will expire SIX (6) MG tutle, cause the application to become A	reply be timely filed irly (30) days will be considered timely. NTHS from the mailing date of this communication. (BANDONED (35 U.S.C. § 133).
1) Responsive to communication(s) filed on _	•	
/ ILL.	This action is non-final.	
3) Since this application is in condition for all closed in accordance with the practice und	owance except for formal mailer Ex parte Quayle, 1935 C	atters, prosecution as to the merits is i.D. 11, 453 O.G. 213.
Disposition of Claims		
4) Claim(s) 1-24 is/are pending in the applicat	tion.	
4a) Of the above claim(s) 18-22 is/are withd	rawn from consideration.	
5) Claim(s) is/are allowed.		
6)⊠ Claim(s) <u>1-17,23 and 24</u> is/are rejected.		
7) Claim(s) is/are objected to.		
8) Claims are subject to restriction and	d/or election requirement.	
Application Papers		
9) The specification is objected to by the Exam	niner.	
10) The drawing(s) filed on is/are objected		
11) The proposed drawing correction filed on _		disapproved.
12) The oath or declaration is objected to by the	e Examiner.	
Priority under 35 U.S.C. § 119		
13) Acknowledgment is made of a claim for fore	eign priority under 35 U.S.C	. § 119(a)-(d).
a) ☐ All b) ☐ Some * c) ☐ None of:		
1. Certified copies of the priority docum	ents have been received.	
2. Certified copies of the priority docum		
<ul> <li>3. Copies of the certified copies of the papelication from the International</li> <li>* See the attached detailed Office action for a</li> </ul>	Bureau (PCT Rule 17.2(a))	,
14) Acknowledgement is made of a claim for do		
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Attachment(s)	40. 57	Summan (BTO 413) Banar Ma/a)
<ul> <li>15) Motice of References Cited (PTO-892)</li> <li>16) Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> </ul>	18) 🔀 Intervi	ew Summary (PTO-413) Paper No(s) of Informal Patent Application (PTO-152)

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#### Election/Restrictions

- 1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-19, and 22-24, drawn to a method of laminating a chip bearing card, classified in class 156, subclass 153.
- II. Claims 20 and 21, drawn to a laminated card, classified in class 235, subclass 488.

  The inventions are distinct, each from the other because of the following reasons:
- 2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by a materially different process such as one where the recess was formed in the substrate by etching chemically rather than mechanically milling. Additionally, the chip could be embedded in a piece of plastic with a preformed recess therein and have a piece of plastic laminated there over in order to form the laminated card.
- 3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
- 4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper. This application contains claims directed to the following patentably distinct species of the claimed invention: the species where the recess was

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formed via a milling operation or the species where the recess was preformed and maintained with a spacer during the laminating operation.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claims are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

5. During a telephone conversation with Mark Watkins on 11-30-00 a provisional election was made with traverse to prosecute the invention of Group I, the species of milling out the recess for the contacts, claims 1-17, 23, and 24. Affirmation of this election must be made by

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applicant in replying to this Office action. Claims 18-22 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

## Claim Rejections - 35 USC § 112

- 6. The following is a quotation of the second paragraph of 35 U.S.C. 112:
  The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 7. Claims 1-17, 23 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 12, the line ends with a ".", however the claim does not end here.

Applicant is advised that the claim should only have one period at the end of the claim. It is suggested that --.-- be changed to --, and;--.

## Double Patenting

8. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See Miller v. Eagle Mfg. Co., 151 U.S. 186 (1894); In re Ockert, 245 F.2d 467, 114 USPQ 330 (CCPA 1957), and In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer <u>cannot</u> overcome a double patenting rejection based upon 35 U.S.C. 101.

9. Claim 11 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim1 of prior U.S. Patent No. 6,036,099. This is a double patenting rejection. All of the limitation of dependent claim 11 are claimed in independent claim 1 of the prior application.

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10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

- 11. Claims 1-17, 23, and 24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No. 6,036,099.

  Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims presented herein are generic to the operation as recited in the earlier patent and therefore the subject matter of the same are covered by the earlier claimed patent, see In re Goodman, 29 USPQ2nd 2010.
- 12. Claims 1-17, 23 and 24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of U.S. Patent No. 5,817,207 in view of Templeton, Jr. et al.

The claimed invention in U.S. '207 is essentially the same invention as recited herein, except that the claims failed to recite that one skilled in the art would have milled the assembly in order to form contacts with the electronic component disposed within the card. However, as envisioned by Templeton, Jr. et al such milling to make electrical contact in a card with an embedded electronic component therein was known. Templeton, et al suggested that one skilled in the art would have known that subsequent to lamination of a circuit component within a card

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one would have milled the same. More specifically, an inductive coil 201 was formed upon a plastic substrate 202 of PVC for example. Onto the substrate 202 one laminated a second substrate 203 which covered and encapsulated the coil 201. The reference taught that subsequent to the lamination operation one milled out the contact holes 203b through the substrate in locations where the contact pads 201a of the inductive coil are in order to facilitate electrical contact with the inductive coil which was embedded within the plastic sheets. See column 7, lines 6-17. Because it would have been desirable to make contact with an embedded coil in a smart card which was a contactless card as envisioned by Templeton, Jr. et al, it would have been obvious to one of ordinary skill in the art of manufacturing a smart card to incorporate a milling step after card formation in the operations of US Patent '207 in the formation of a contactless smart card.

#### Claim Rejections - 35 USC § 103

- 13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- Claims 1, 4-10, and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 6-176214 in view of UK 2,279,610 and Templeton, Jr. et al optionally further taken with UK 2,225,283.

Japanese Patent '214 taught a process for forming a smart card which included the steps of laminating with heat and pressure an assembly which included an IC chip 11 and a thin coil 12

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(an antennae). The IC chip 11 and antennae 12 were disposed unsupported between plastic films 14. On either side of plastic films 14 were additional plastic films 15. The assembly was disposed in a press and heat and pressure were applied in order to laminate the layers together to form the smart card. The reference to Japanese Patent '214 failed to teach that the heat and pressure laminating operation included a cooling operation while the press remained under pressure. Additionally, there is no mention of milling the laminated card in order to gain access to contacts of the chip and/or antennae for purposes of making physical contact with the same.

However, in the art of making a laminated smart card, it was known as evidenced by UK '610 that one skilled in the art when laminating the same together would not have applied high heat and pressure and then removed the same in the lamination operation for processing under such extreme conditions would lead to damage of the chip and/or antennae in the laminate. The reference to UK '610 suggested that one skilled in the art would have interposed a printed circuit 11 with reinforced elements 19 between two outer sheets 37 and 38 of thermoplastic in the PVC family with interposed polyester layers coated with thermally activated catalyst adhesive and the assembly was disposed between pressing plates. The assembly was heated and then pressure applied to the same in order to encapsulate the electrical components of the card. Subsequent to the application of this heat and pressure, the pressure was maintained while the card was allowed to cool in the press, see page 11, line 16-page 12, line 12. The reference made clear that in order to avoid damaging the integrated circuit which was being encapsulated that one would have heated the assembly, then applied heat and pressure to the assembly in the press and then cooled the assembly while pressure was maintained. Clearly, one viewing the same would have understood that heat and pressure as well as cooling under pressure would have been performed

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when laminating the card with the integrated circuit therein. Note that Japanese Patent '214 performed the lamination operation in a heated press. The combination fails to suggest that one would have milled out openings in the card after formation in order to provide open contacts in the card.

However, the reference to Templeton, et al suggested that one skilled in the art would have known that subsequent to lamination of a circuit component within a card one would have milled the same. More specifically, an inductive coil 201 was formed upon a plastic substrate 202 of PVC for example. Onto the substrate 202 one laminated a second substrate 203 which covered and encapsulated the coil 201. The reference taught that subsequent to the lamination operation one milled out the contact holes 203b through the substrate in locations where the contact pads 201a of the inductive coil are in order to facilitate electrical contact with the inductive coil which was embedded within the plastic sheets. See column 7, lines 6-17. Because it would have been desirable to make contact with an embedded coil in a smart card which was a contactless card as envisioned by Templeton, Jr. et al, it would have been obvious to one of ordinary skill in the art of manufacturing a smart card to incorporate a milling step after card formation in the operations of Japanese Patent 6-176214 wherein the pressing operation was performed in a heated press where the pressure was maintained during the cooling operation as suggested by UK 2,279,610.

With respect to claims 4-5, the references as set forth above suggested the use of PVC and/or polyester materials and one skilled in the art would have been determined the suitable thickness for the material through routine experimentation. Regarding claims 6-7 and 9-10, note that UK '610 suggested that one skilled in the art would have increased the pressure after

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increasing the temperature (ramped the same up). One skilled in the art would have optimized the specific pressure used in order to achieve a good bond without disrupting the ability of the circuit to operate properly. Regarding claim 15, note that Templeton taught one would have provided an electrical contact in the cavity formed by milling. Regarding claims 16 and 17, one skilled in the art would have understood what kind of chips would have been useful for the manufacture of the cards. Regarding claims 8 and 14, the references as set forth above suggested the use of multiple films over the chip, for example Japanese Patent '214 suggested the use of multiple films 14 and 15 over the assembly. The specific pressures and temperatures employed in the operation would have been determined through routine experimentation.

While it is believed that the reference to UK '610 suggested that one would have ramped up the pressure during the laminating operation, to further evidence that the highest amount of pressure would have been applied when the assembly was cooled, the reference to UK '283 is cited. UK '283 is manufacturing an integrated circuit card where the assembled layers (which included thin plastic layers which had printing on the layers as well as in integrated circuit therein) were laminated together in a press. The reference taught that the press would have been preheated, the pressure applied and then the assembly removed or the assembly would have been preheated and the pressure applied in steps with the highest pressure applied while the assembly was being cooled in the press, see page 11, lines 3-13. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a pressing operation in the manufacture of an integrated circuit card wherein the pressue applied would have been the highest when the card was being cooled in the press as suggested by UK 2,225,283 wherein the laminated card was formed by laminating with heat and pressure in a press as suggested by

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Japanese Patent 6-176214 and UK 2,279,610 wherein after lamination the card would have been milled in order to expose the contact pads of the electronic component within the card as suggested by Templeton, Jr. et al.

For a discussion of the dependent claims, see above.

Claims 2, 3, 11-13, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 14 further taken with UK 2,294,899.

The references as set forth above in paragraph 14 suggested the overall operation, they failed to suggest that one would have provided the platens with a matte surface thereon such that the finished exterior surfaces of the card had a matte finish. Additionally, the references failed to mention a printing operation used in manufacturing the card (it should be noted that UK '283 suggested that layes 2 and 6 would have been provided with printing thereon, see page 5, lines 3-5 of the UK document). However, in the art of manufacturing a smart card where an integrated circuit was disposed within the card, it was known at the time the invention was made to provide the exterior of the card with a matte finish where the same was provided by employed pressing plates which had a matte finish thereon in order to reduce the spectral reflection as suggested by UK '899, see page 4, lines 4-6. Additionally, in manufacturing such smart cards, it was well known at the time the invention was made to provide printed information upon the same where the printed information would have been provided upon the layers prior to the pressing operation as in printed information 8 and additional information would have been printed upon the cards exterior after formation as in image 10. It would have been within the purview of the ordinary artisan to select suitable printing techniques from those which were readily available to the artisan and the specified printing techniques claimed are taken as conventional in the art of

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making smart cards. It would have been obvious to one of ordinary skill in the art of laminating to form a smart card to provide the card with a matte finish (in order to reduce reflection) as well as to provide the card with printing thereon in order to facilitate a useful card as suggested by UK 2,294,899 in the manufacture of a smart card as set forth above in paragraph 14.

## Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 703-308-2069. The examiner can normally be reached on Monday-Friday 6:30-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3599 for regular communications and 703-305-7718 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Art Unit 1733

JHA December 1, 2000

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		Notice of Refere	annon Citad	, L	09/368,846		LEIGHTON, KEIT	HR.	
		Notice of Refere	ences Chea		Examiner	Art Unit	Page 1 of 1		
					Jeff H. Aftergut		1733		<u> </u>
_			<del></del>	U.S. PAT	ENT DOCUMENTS		116	DOCUME	NT
:		DOCUMENT NO.	DATE		NAME	CLASS	ŠÚBCLASS	SOURCE	**
-			1000	1.2.14		156	298	APS	OTHER.
긔	<u> </u>	5,817,207	Oct. 1998	Leighton		235	488	<del>                                     </del>	
	В	6,036,099	Mar. 2000	Leighton			492		
	С	5,519,201	May. 1998	Templeton,	Jr. et al	235	492	<del> </del>	<del></del>
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*		DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUBCLASS	APS	OTHER
	N	2,279,610	Jan. 1995	UK	GEC Avery Lmtd.	<u> </u>			
	0	6-176214	Jun. 1994	Japan					
	Р	2,225,283	May. 1990	UK	-				
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"A copy of this reference is not being furnished with this Office action. (See Manual of Patent Examining Procedure, Section 707.05(a).)
"APS encompasses any electronic search i.e. text, image, and Commercial Databases.
U.S. Patent and Trademark Office
PTO-892 (Rev. 03-98)
Notice of References Cited



# UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231

ATTORNEY DOCKET NO. APPLICATION NO. FILING DATE FIRST NAMED INVENTOR 09/368,846 08/05/99 LEIGHTON K 6014-2-CON EXAMINER 021324 IM52/0720 OLDHAM & OLDHAM CO AFTERGUT, TWIN OAKS ESTATE 1225 W MARKET STREET AKRON OH 44313 1733 DATE MAILED: 07/20/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

	Application No.	Applicant(s)	
•	09/368.846	LEIGHTON, KEITH R.	
Notice of Abandonment	Examiner	Art Unit	
	Jeff H. Aftergut	1733	
- The MAILING DATE of this communication app			_
		•	
This application is abandoned in view of:			
<ol> <li>Applicant's failure to timely file a proper reply to the Offic         <ul> <li>(a) ☐ A reply was received on (with a Certificate of Nerring of the period for reply (including a total extension of time of the period of th</li></ul></li></ol>	Mailing or Transmission dated month(s)) which expired on	), which is after the expiration of the 	
(A proper reply under 37 CRF 1.113 to a final rejection application in condition for allowance; (2) a timely file Continued Examination (RCE) in compliance with 37	n consists only of: (1) a timely filed d Notice of Appeal (with appeal fee	amendment which places the	
(c) ⊠ No reply has been received.			
2. Applicant's failure to timely pay the required issue fee an from the mailing date of the Notice of Allowance (PTOL-		in the statutory period of three month:	S
(a) The issue fee and publication fee, if applicable, wa, which is after the expiration of the statutory particle.	s received on (with a Certi period for payment of the issue fee	ficate of Mailing or Transmission date (and publication fee) set in the Notice	ed of
(b) The submitted fee of \$ is insufficient. A balance	e of \$ is due.		
The issue fee required by 37 CFR 1.18 is \$	The publication fee, if required by	37 CFR 1.18(d), is \$	
(c) $\square$ The issue fee and publication fee, if applicable, has r	not been received.		
Applicant's failure to timely file new formal drawings as re Allowability (PTO-37).	equired by, and within the three-mo	nth period set in, the Natice of	
<ul> <li>(a) ☐ Proposed new formal drawings were received on</li></ul>	(with a Certificate of Mailing or	Transmission dated), which is	
(b) The proposed new formal drawings filed on and	e not acceptable and the period for	reply has expired.	
(c) \( \sum \) No proposed new formal drawings have been receive	ed.		
The letter of express abandonment which is signed by the applicants.	ne attorney or agent of record, the a	issignee of the entire interest, or all of	,
<ol> <li>The letter of express abandonment which is signed by a 1.34(a)) upon the filing of a continuing application.</li> </ol>	n attorney or agent (acting in a rep	resentative capacity under 37 CFR	
6. The decision by the Board of Patent Appeals and Interfer of the decision has expired and there are no allowed cla		ause the period for seeking court revie	<b>:</b> W
7. The reason(s) below:			
	,		
		Jeffyl. Aftergur Primary Examiner Art Unit: 1733	



#### COPY OF PAPERS ORIGINALLY FILED

# 1

Docket No. 6014-2-CON

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In repatent application of: Keith Leighton

Group Art Unit: 1733

Serial No.: 09/368,846

Examiner:

J. Aftergut

Filed:

August 5, 1999

Date:

February 15, 2002

For:

Hot Lamination Process for the Manufacture of a Combination Contact/Contactless Smart Card and Product Resulting Therefrom

PETITION FOR REVIVAL OF AN APPLICATION FOR PATENT ABANDONE OF UNINTENTIONALLY UNDER 37 C.F.R. §1.137(b)

Attention: Office of Petitions
Assistant Commissioner for Patents
Box DAC
Washington, D.C. 20231

Sir:

The above-identified application became abandoned for failure to file a timely reply to the final Office Action mailed on December 6, 2000, which set a three month period for reply. The abandonment date of this application is March 6, 2001.

APPLICANT HEREBY PETITIONS FOR REVIVAL OF THIS APPLICATION.

1. Petition Fee

Enclosed is a check for the small entity fee \$640.00 (37 C.F.R. §1.17(m)).

2. Reply and/or fee.

Enclosed herewith is an amendment and response to the Office Action mailed. Enclosed is a check in the amount of \$45.00 for additional claims.

03/06/2002 GTEFFERA 00000089 09368846

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Docket No. 6014-2-CON Serial No. 09/368,846 February 15, 2002 Page 2

3. Terminal Disclaimer with disclaimer fee.

Since this application was filed on or after June 8, 1995, no terminal disclaimer is required.

- 4. Statement: The entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 C.F.R. § 1.137(b) was unintentional.
- 5. Additional Fees

Please charge Account 15-0450 for any additional fees may be required by the filing of these papers.

Respectfully submitted,

Hahn Loeser & Parks LLP

Date: February 15,2002

Michael H. Minns Reg. No. 31,985

Hahn Loeser + Parks LLP Twin Oaks Estate 1225 West Market Street Akron, Ohio 44313-7188 (330) 864-5550

**Enclosures: Amendment** 

Reply

Terminal Disclaimer Return Postcard

CERTIFICATION UNDER 37 C.F.R. § 1.8(a)

I hereby certify that, on the date shown below, this correspondence is being deposited with the United States Postal Service in an envelope addressed to the Assistant Commissioner of Patents, Washington D.C. 20231 with sufficient postage as first class mail.

Date: February 15, 2002

Michael H. Minns or print name of person certifying